

BILLIE

Billie, the season's first super typhoon, became a tropical depression in the western Philippine Sea some 250nm east of Luzon on 12 July. Her early history can be traced to the Yap-Palau area on 10 July as a weak circulation in the monsoon trough.

Billie initially tracked westward, gradually shifting to the northwest in response to a long wave, mid-tropospheric trough over eastern China. Reaching tropical storm force late on the 13th, Billie assumed a northerly course at a speed of 7 kts.

The long wave trough remained stationary, influencing Billie to maintain a meridional track at about 8 kts. Her center never deviated more than 30nm either side of 125.5E for 4 days, covering a distance of 720nm. This steadiness in direction for such an extended period of time sets Billie apart from any other northward moving typhoon during the period 1947-1972.

Rapid deepening occurred once typhoon force was attained early on the 14th as Billie's central pressure fell 50mb in 24 hours. At 15/0330 GMT, aircraft reconnaissance indicated that the central pressure had dropped to 916mb within a tightly organized eye 8nm in diameter (Figure 4-5).

Billie's central pressure rose to 954mb during the next 18 hours as she approached the Ryukyus. Commencing an unusual second deepening as she crossed through the island chain, Billie's central pressure dropped to 917mb in the East China Sea (16/1154 GMT).

Billie passed just east of Miyako Jima, where maximum sustained winds of 65 kts with gusts to 104 kts were recorded (16/

0700 GMT). The lowest pressure reading at the Japanese Meteorological Agency Station was 947.5mb (16/0650 GMT).

The island of Okinawa experienced gale force winds as Billie transited northward through the East China Sea. Naha registered maximum sustained winds of 35 kts with gusts to 58 kts (16/1700 GMT) while White Beach Naval Port Facility recorded 45 kts sustained with gusts to 55 kts (16/1900 GMT). Kadena AFB reported lesser winds of 28 kts (16/1640 GMT) with gusts of 43 kts (16/1354 GMT). Based on land radar, Billie's eye passed 105nm west of Okinawa at 16/1800 GMT.

On the 17th, a short wave deepened the northern portion of the long wave trough situated in the Lake Baikal region of Siberia, causing increased ridging over Manchuria and the Sea of Japan. This ridging prevented Billie from recurving. On the 18th, Billie shifted to a northwest course 120nm southsouthwest of Cheju-do Island. Satellite imagery indicated drier air off the Asian Mainland was entering Billie's circulation at this time. She weakened significantly during the 18th, dropping to tropical storm strength late that day while tracking into the Yellow Sea.

Approaching the Gulf of Chihli on the 19th, Billie acquired extratropical characteristics and accelerated to a forward speed greater than 20 kts. Billie finally moved inland near Chin-Chow China and dissipated on the 20th.

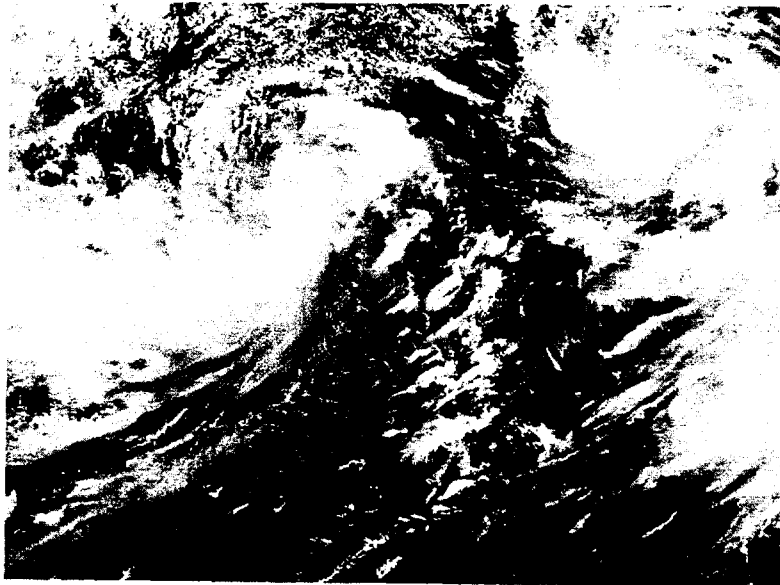


FIGURE 4-5. Typhoon Billie (right) 7 hours prior to an unusual second deepening 190 nm east of Taiwan. Typhoon Dot (left) in the South China Sea, 16 July 1973, 0416 GMT. (DMSP imagery)